

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method for satisfying a single request from a client for a plurality of content components derived from content hosted by a plurality of distinct, separately accessible component servers for forming a personalized network page, comprising:

receiving a single request specifying ~~the~~ multiple content components derived from content hosted by the plurality of distinct, separately accessible component servers for forming the personalized network page;

after receiving the single request, generating a plurality of information requests for the content as parallel worker threads spawned from a main execution thread;

sending the plurality of requests as parallel or rapid sequential worker threads so that each information request is sent to the component server hosting the content corresponding to the information request before receiving a response to any of the information requests, thereby permitting concurrent generation of the content components at the component servers;

forming the content components from the responses to the information requests including assembling the personalized network page; and

transmitting the personalized network page including the multiple content components to the client.

Claim 2 (original): The method of claim 1, wherein:

the single request is a request for a personalized Web page;

the forming step comprises assembling the personalized Web page from the content components; and

the transmitting step comprises sending the personalized Web page to the client.

Claim 3 (currently amended): The method of claim 1 2, further comprising:
instantiating a timer after the step of sending each information request and before the step of forming the personalized web page; and
if no response is received from one of the component servers prior to a timeout period of the timer, performing the steps of immediately establishing the response from that component server as a null value, and carrying out the steps of forming the personalized network page and transmitting the personalized network page to the client without waiting for that response.

Claim 4 (currently amended): The method of claim 1 3, wherein the component servers generate the responses in different data formats, and the method further comprising: comprises converting the responses to a common data format.

Claim 5 (original): The method of claim 4, wherein the common data format is based on a markup language.

Claim 6 (original): The method of claim 4, wherein the converting step is performed at the respective component servers.

Claim 7 (original): The method of claim 4, wherein the converting step is performed at a main server, the main server also receiving the single request from the user and transmitting the personalized network page to the client.

Claim 8 (original): The method of claim 7, wherein the main server is a corporate portal server.

Claim 9 (original): The method of claim 7, wherein the main server is an Internet portal server.

Claim 10 (original): The method of claim 7, wherein each of the main server and the component servers are physically separate, and wherein the information requests and responses are transmitted according to a standard network protocol.

Claim 11 (original): The method of claim 10, wherein the standard network protocol is selected from the group consisting of HTTP, HTTPS, WAP, and FTP.

Claim 12 (currently amended): The method of claim 1 14, wherein the component servers comprise ~~are each selected from the group consisting of an~~ email server servers, an enterprise resource planning server servers, and or a customer relationship management server, or combinations thereof servers.

Claim 13 (original): The method of claim 3, wherein the information requests are transmitted according to a standard network protocol.

Claim 14 (original): The method of claim 13, wherein the standard network protocol is selected from the group consisting of HTTP, HTTPS, WAP, and FTP.

Claim 15 (original): The method of claim 1, further comprising:
generating a state machine to represent the progress of each information request; and
recursively processing the state machines to advance the progress of each information request.

Claim 16 (currently amended): Computer-readable media embodying instructions executable by a computer to perform a method for satisfying a single request from a client for a plurality of content components derived from content hosted by a plurality of distinct, separately accessible component servers for forming a personalized network page, the method comprising:

receiving a single request specifying the multiple content components derived from content hosted by the plurality of distinct, separately accessible component servers for forming the personalized network page;

after receiving the single request, generating a plurality of information requests for the content as parallel worker threads spawned from a main execution thread;

sending the plurality of requests as parallel or rapid sequential worker threads so that each information request is sent to the component server hosting the content corresponding to the information request before receiving a response to any of the information requests, thereby permitting concurrent generation of the content components at the component servers;

forming the content components from the responses to the information requests including assembling the personalized network page; and

transmitting the personalized network page including the multiple content components to the client.

Claim 17 (original): The media of claim 16, wherein the method further comprises:

the single request is a request for a personalized Web page;

the forming step comprises assembling the personalized Web page from the content components; and

the transmitting step comprises sending the personalized Web page to the client.

Claim 18 (currently amended): The media of claim 16 47, wherein the method further comprises:

instantiating a timer after the step of sending each information request and before the step of forming the personalized web page; and

if no response is received from one of the component servers prior to a timeout period of the timer, performing the steps of immediately establishing the response from that component server as a null value, and carrying out the steps of forming the personalized network page and transmitting the personalized network page to the client without waiting for that response.

Claim 19 (currently amended): The media of claim 16 48, wherein the component servers generate the responses in different data formats, wherein the method further comprises:

converting the responses to a common data format.

Claim 20 (original): The media of claim 19, wherein the common data format is based on a markup language.

Claim 21 (original): The media of claim 19, wherein the converting step is performed at the respective component servers.

Claim 22 (original): The media of claim 19, wherein the converting step is performed at a main server, the main server also receiving the single request from the user and transmitting the personalized network page to the client.

Claim 23 (original): The media of claim 22, wherein the main server is a corporate portal server.

Claim 24 (original): The media of claim 22, wherein the main server is an Internet portal server.

Claim 25 (original): The media of claim 22, wherein each of the main server and the component servers are physically separate, and wherein the information requests and responses are transmitted according to a standard network protocol.

Claim 26 (original): The media of claim 25, wherein the standard network protocol is selected from the group consisting of HTTP, HTTPS, WAP, and FTP.

Claim 27 (currently amended): The media of claim ~~16~~ 26, wherein the component servers comprise ~~are each selected from the group consisting of an email server servers, an enterprise resource planning server servers, and or a customer relationship management server, or combinations thereof servers.~~

Claim 28 (original): The media of claim 18, wherein the information requests are transmitted according to a standard network protocol.

Claim 29 (original): The media of claim 28, wherein the standard network protocol is selected from the group consisting of HTTP, HTTPS, WAP, and FTP.

Claim 30 (original): The media of claim 16, wherein the method further comprises:

generating a state machine to represent the progress of each information request; and

recursively processing the state machines to advance the progress of each information request.

Claim 31 (currently amended): An apparatus for satisfying a single request from a client for a plurality of content components derived from content hosted by a plurality of distinct, separately accessible component servers for forming a personalized network page, comprising:

means for receiving a single request specifying the multiple content components derived from content hosted by the plurality of distinct, separately accessible component servers for forming the personalized network page;
means for, after receiving the single request, generating a plurality of information requests for the content as parallel worker threads spawned from a main execution thread;

means for sending the plurality of requests as parallel or rapid sequential worker threads so that each information request is sent to the component server hosting the content corresponding to the information request before receiving a response to any of the information requests, thereby permitting concurrent generation of the content components at the component servers;

means for forming the content components from the responses to the information requests including assembling the personalized network page; and

means for transmitting the personalized network page including the multiple content components to the client.

Claim 32 (original): The apparatus of claim 31, wherein:

the single request is a request for a personalized Web page;

the means for forming comprises assembling the personalized Web page from the content components; and

the means for transmitting comprises sending the personalized Web page to the client.

Claim 33 (currently amended): The apparatus of claim 31 32, further comprising:

means for instantiating a timer after the step of sending each information request and before the step of forming the personalized web page; and

means for, if no response is received from one of the component servers prior to a timeout period of the timer, performing the steps of immediately establishing the response from that component server as a null value, and carrying out the steps of forming the personalized network page and transmitting the personalized network page to the client without waiting for that response.

Claim 34 (currently amended): The apparatus of claim 31 ~~33~~, wherein the component servers generate the responses in different data formats, wherein the apparatus further comprising comprises:

means for converting the responses to a common data format.

Claim 35 (original): The apparatus of claim 34, wherein the common data format is based on a markup language.

Claim 36 (original): The apparatus of claim 34, wherein the means for converting is part of the respective component servers.

Claim 37 (original): The apparatus of claim 34, wherein the means for converting is part of a main server, the main server also receiving the single request from the user and transmitting the personalized network page to the client.

Claim 38 (original): The apparatus of claim 37, wherein the main server is a corporate portal server.

Claim 39 (original): The apparatus of claim 37, wherein the main server is an Internet portal server.

Claim 40 (original): The apparatus of claim 37, wherein each of the main server and the component servers are physically separate, and wherein the information requests and responses are transmitted according to a standard network protocol.

Claim 41 (original): The apparatus of claim 40, wherein the standard network protocol is selected from the group consisting of HTTP, HTTPS, WAP, and FTP.

Claim 42 (currently amended): The apparatus of claim 41, wherein the component servers comprise ~~are each selected from the group consisting of an~~ email server ~~servers~~, an enterprise resource planning server ~~servers~~, and or a customer relationship management server, or combinations thereof ~~servers~~.

Claim 43 (original): The apparatus of claim 33, wherein the information requests are transmitted according to a standard network protocol.

Claim 44 (original): The apparatus of claim 43, wherein the standard network protocol is selected from the group consisting of HTTP, HTTPS, WAP, and FTP.

Claim 45 (original): The apparatus of claim 31, further comprising:
 means for generating a state machine to represent the progress of each information request; and
 means for recursively processing the state machines to advance the progress of each information request.

Claim 46 (currently amended): An apparatus for satisfying a single request from a client for a plurality of content components derived from content hosted by a plurality of distinct, separately accessible component servers for forming a

personalized network page, the apparatus comprising a processor configured to perform a method comprising the steps of:

receiving a single request specifying the multiple content components derived from content hosted by the plurality of distinct, separately accessible component servers for forming the personalized network page;

after receiving the single request, generating a plurality of information requests for the content as parallel worker threads spawned from a main execution thread;

sending the plurality of requests as parallel or rapid sequential worker threads so that each information request is sent to the component server hosting the content corresponding to the information request before receiving a response to any of the information requests, thereby permitting concurrent generation of the content components at the component servers;

forming the content components from the responses to the information requests including assembling the personalized network page; and

transmitting the personalized network page including the multiple content components to the client.

Claim 47 (currently amended): The apparatus of claim 46, wherein:

the single request is a request for a personalized Web page;

the forming ~~step~~ comprises assembling the personalized Web page from the content components; and

the transmitting ~~step~~ comprises sending the personalized Web page to the client.

Claim 48 (currently amended): The apparatus of claim ~~46~~ 47, wherein the method further comprises ~~processor is further configured to perform the steps of:~~

instantiating a timer after the step of sending each information request and before the step of forming the personalized web page; and

if no response is received from one of the component servers prior to a timeout period of the timer, performing the steps of immediately establishing the response from that component server as a null value, and carrying out the steps of forming of the personalized network page and transmitting the personalized network page to the client without waiting for that response.

Claim 49 (currently amended): The apparatus of claim 46 48, wherein the component servers generate the responses in different data formats, wherein the method further comprises ~~processor is further configured to perform the steps of:~~ converting the responses to a common data format.

Claim 50 (original): The apparatus of claim 49, wherein the common data format is based on a markup language.

Claim 51 (currently amended): The apparatus of claim 49, wherein the converting ~~step~~ is performed at the respective component servers.

Claim 52 (currently amended): The apparatus of claim 49, wherein the converting ~~step~~ is performed at a main server, the main server also receiving the single request from the user and transmitting the personalized network page to the client.

Claim 53 (original): The apparatus of claim 52, wherein the main server is a corporate portal server.

Claim 54 (original): The apparatus of claim 52, wherein the main server is an Internet portal server.

Claim 55 (original): The apparatus of claim 52, wherein each of the main server and the component servers are physically separate, and wherein the information requests and responses are transmitted according to a standard network protocol.

Claim 56 (original): The apparatus of claim 55, wherein the standard network protocol is selected from the group consisting of HTTP, HTTPS, WAP, and FTP.

Claim 57 (currently amended): The apparatus of claim 56, wherein the component servers comprise ~~are each selected from the group consisting of an~~ email server ~~servers~~, an enterprise resource planning server ~~servers~~, and or a customer relationship management server, or combinations thereof ~~servers~~.

Claim 58 (original): The apparatus of claim 48, wherein the information requests are transmitted according to a standard network protocol.

Claim 59 (original): The apparatus of claim 58, wherein the standard network protocol is selected from the group consisting of HTTP, HTTPS, WAP, and FTP.

Claim 60 (currently amended): The apparatus of claim 46, wherein the method further comprises ~~processor is further configured to perform the steps of:~~

generating a state machine to represent the progress of each information request; and

recursively processing the state machines to advance the progress of each information request.

Claim 61 (new): The method of claim 1, further comprising uniquely identifying a user who wishes to view the personalized network page regardless of which access terminal is being used.

Claim 62 (new): The method of claim 1, further comprising caching one or more of the content components for retrieval without contacting the component server in a future request.

Claim 63 (new): The method of claim 62, wherein the caching comprises indexing at least one of the content components according to one or more user preferences.

Claim 64 (new): The method of claim 1, further comprising retrieving one or more previously cached content components for including in the personalized network page without contacting the corresponding component server.

Claim 65 (new): The method of claim 64, wherein at least one of the cached content components was indexed according to one or more user preferences, and wherein the retrieving comprises calling the at least one cached content component according to the indexing.

Claim 66 (new): The method of claim 1, further comprising providing a form allowing a user to select the components from a library of components.

Claim 67 (new): The media of claim 16, the method further comprising uniquely identifying a user who wishes to view the personalized network page regardless of which access terminal is being used.

Claim 68 (new): The media of claim 16, the method further comprising caching one or more of the content components for retrieval without contacting the component server in a future request.

Claim 69 (new): The media of claim 68, wherein the caching comprises indexing at least one of the content components according to one or more user preferences.

Claim 70 (new): The media of claim 16, the method further comprising retrieving one or more previously cached content components for including in the personalized network page without contacting the corresponding component server.

Claim 71 (new): The media of claim 70, wherein at least one of the cached content components was indexed according to one or more user preferences, and wherein the retrieving comprises calling the at least one cached content component according to the indexing.

Claim 72 (new): The media of claim 16, the method further comprising providing a form allowing a user to select the components from a library of components.

Claim 73 (new): The apparatus of claim 31, the method further comprising uniquely identifying the user who wishes to view the personalized network page regardless of which access terminal is being used.

Claim 74 (new): The apparatus of claim 31, the method further comprising caching one or more of the content components for retrieval without contacting the component server in a future request.

Claim 75 (new): The apparatus of claim 74, wherein the caching comprises indexing at least one of the content components according to one or more user preferences.

Claim 76 (new): The apparatus of claim 31, the method further comprising retrieving one or more previously cached content components for including in the personalized network page without contacting the corresponding component server.

Claim 77 (new): The apparatus of claim 76, wherein at least one of the cached content components was indexed according to one or more user preferences, and wherein the retrieving comprises calling the at least one cached content component according to the indexing.

Claim 78 (new): The apparatus of claim 31, the method further comprising providing a form allowing a user to select the components from a library of components.

Claim 79 (new): The apparatus of claim 46, the method further comprising uniquely identifying the user who wishes to view the personalized network page regardless of which access terminal is being used.

Claim 80 (new): The apparatus of claim 46, the method further comprising caching one or more of the content components for retrieval without contacting the component server in a future request.

Claim 81 (new): The apparatus of claim 80, wherein the caching comprises indexing at least one of the content components according to one or more user preferences.

Claim 82 (new): The apparatus of claim 46, the method further comprising retrieving one or more previously cached content components for including in the

personalized network page without contacting the corresponding component server.

Claim 83 (new): The apparatus of claim 82, wherein at least one of the cached content components was indexed according to one or more user preferences, and wherein the retrieving comprises calling the at least one cached content component according to the indexing.

Claim 84 (new): The apparatus of claim 46, the method further comprising providing a form allowing a user to select the components from a library of components.